

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
RISK MANAGEMENT WORKSHEET

1. Organization and Location Bureau of Land Management – Moab Field Office			2. Page <u>1</u> of <u>4</u>		
3. Operation / Task Watercraft Operation, River Patrol, boater assistance and rescue on the Colorado River (from CO/ UT border including Westwater Canyon & Moab Daily), Lower Dolores (Gateway to Dewey Bridge) and the Green River (Labyrinth Canyon).	4. Beginning Date: 04/16/2015	5. Ending Date: 09/30/2015	6. Date Prepared 04/16/2015		

7. Prepared by (Name / Duty Position) *Jennifer Jones, Outdoor Recreation Planner*

8. Identified Hazards	9. Assess the Hazards: Initial Risk				10. Control Measures Developed for Identified Hazards: <i>(Specific measures taken to reduce the probability of a hazard)</i>	11. Assess the Hazard's Residual Risk:				12. How to Implement the Controls: (May Be Filled in By Hand)	13. Supervisors and Evaluation by: (Continuous Leader Checks, Buddy System, etc.)	
(Be Specific)	L	M	H	E	(Be Specific)	L	M	H	E	(Be Specific)	(Be Specific)	
SUMMARY OF HAZARDS boating operation in Westwater Canyon and Colorado River waters: -Fall overboard -Hypothermia -Drowning -Swept away -Swamping/sinking -Bad Weather Lost/stranded DETAILS ON FOLLOWING PAGES	L	M	X	E	SUMMARY OF NECESSARY PPE/GEAR: -Appropriate Coast Guard-approved PFD -Cold water PPE or wet/dry suits. -Field first aid kit -Oars or paddles -Emergency flares, signals, mirror. -Survival kits with extra food, clothing -Fire starting materials in H2O proof cont. -Reliable emergency communications device (satellite phone) TRAINING REQUIRED: -First Aid and CPR -Swiftwater Rescue course	L	X	M	H	E	All gear must be acquired and all training accomplished prior to trip.	Supervisory responsibility. Periodic reviews completed by the employees during the season.

14. Remaining Risk Level After Control Measures Are Implemented: (CIRCLE HIGHEST REMAINING RISK LEVEL)	LOW (Line Supervisor)	MEDIUM (Branch Chief)	HIGH (District Manager)	EXTREMELY HIGH (Must be State Director/Associate)
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15. RISK DECISION AUTHORITY: **(Approval/Authority Signature Block)** (If Initial Risk Level is Medium, High or Extremely High, Brief Risk Decision Authority at that level on Controls and Control Measures used to reduce risks) **(Note:** if the person preparing the form signs this block, the signature indicates only that the appropriate risk decision authority was notified of the initial risk level, control measures taken and appropriate resources requested; and that the risk was accepted by the decision authority.)

(Signature)

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Fall overboard: Drowning			X		-Personal Flotation Device (PFD) appropriate to size of craft, type of water, and wearer's size will be worn at all times when on the craft, or when boarding/departing craft. -Never wear loose fitting waders that are sealed around the ankle that will fill with water in fast moving or powerful water. -Always carry at least one throw-rope on board each craft.		X			-BLM will purchase and supply all appropriate boating PPE required for the trip and/or specified in H-1112-2 Sec 14. -Buddy check before getting on boats.	-Trip leader responsibility to ensure all training and PPE is provided to employees operating on watercraft. -Boat operator is in charge when on the water. -Buddy system of lookouts and active assistance by passengers.
Fall overboard: Swept away by fast moving water; -Collision of body with objects in water. -Trapped by sweepers or snags.			X		Wear PFD appropriate to class of water being traveled. -Stay on back, keep feet pointed downstream, head pointed upstream. -Avoid visible sweepers if possible. -Turn body onto front, head forward and downstream, and strongly swim over top of unavoidable obstacles. -Plan trip when river flow is moderate to low, not at flood stage.		X			-Pre-trip planning, map study, meeting with people experienced in that water. -Purchase proper gear for the class of water.	Supervisor led pre-season training. Periodic reviews completed by the employees during the season.
Fall overboard: Hypothermia from submersion in very cold water.			X		-Boat operator's seating instructions will always be followed. -Remain seated/low in the boat at all times when boat is in motion. (operator may have to stand for clear view) -If acting as bow lookout, remain as low as possible in the boat. -Carry survival kit on the boat in a waterproof bag, containing an extra set of clothing and fire starting materials. -Know signs and treatment for hypothermia. -Learn self-rescue 'heat-huddle' body heat retention techniques. -Wear PFD providing greater insulation and body coverage, wet suits, dry suits. -Plan trips when weather/water conditions are warmer.		X			-All field workers in remote areas must attend first aid and CPR training and all required refresher training.	Supervisor led pre-season training. Periodic reviews completed by the employees during the season.
Collision with object in water, overturned boat.			X		-Avoidance by adjusting speed and position of craft to water conditions and degree of debris present.		X			-Pre-trip: planning, crew meetings, review and inventory of supplies.	Supervisor led pre-season training. Periodic reviews

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-Contact injury from being thrown from boat.					-Avoidance by posting a lookout at bow. -Remain positioned low in boat whenever possible. -If overturned boat is floating in a large river, hang onto craft and do not attempt to swim to shore unless an eddy is present. Stay upstream of overturned craft to avoid being pinned against any obstacles in the water. Boat may drift into shore.					-Daily pre-trip briefings. -All field workers in remote areas must attend first aid and CPR training and all required refresher training.	completed by the employees during the season.
Swamped boat, sinking or overturning.			X		-If overturned boat is floating in a large river, hang onto craft and do not attempt to swim to shore unless an eddy is present. Stay upstream of overturned craft to avoid being pinned against any obstacles in the water. Boat may drift into shore. -Avoid approaching logs in the water at the surface or slightly submerged. -Distribute weight of cargo and personnel evenly around the boat, secure cargo loads.		X			-Pre-trip safety briefing by boatman -Follow boat operators instructions.	Supervisor led pre-season training. Periodic reviews completed by the employees during the season.
Bad weather		X			-Always check daily weather report if available. -Stop and wait out bad weather or water conditions. -Expedite departure to be off river before bad weather		X			-Pre-trip planning, map study, meeting with people experienced in that water. -Daily pre-trip briefings and safety reminders.	Supervisor led pre-season training. Periodic reviews completed by the employees during the season.
Lost, broken down, or stranded			X		-Always carry radio, satellite telephone, -Carry one extra oar or paddle per boat. -Inspect craft prior to each trip and ensure that your craft has been properly maintained. -Always carry extra food, clothing and supplies when traveling through remote areas. -Always carry a well-stocked first aid kit		X			-Pre-trip planning, map study, meeting with people experienced in that water. -All field workers in remote areas must attend first aid and CPR training and all required refresher training.	Supervisor led pre-season training. Periodic reviews completed by the employees during the season.

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(Be Specific)	L	M	H	E	(Be Specific)	L	M	H	E	(Be Specific)	(Be Specific)
Wildlife/critters	X				<p>Bears: Make noise to scare off bears-avoid cubs. In bear country, store food and supplies in bear resistant containers or elevated at least 15' into the air via tree, rope, or platform.</p> <p>-Seal all food in tough, latching or locking containers.</p> <p>-Absolutely no food items can be allowed in individual's tents. Water for drinking only.</p> <p>Bulls (cattle): Avoid if aggressive Gnats: Use repellent/smoke a stogie Mosquitoes: Use repellent to mitigate West Nile virus. Bees/hornets/wasps: Carry medication if known or suspect an allergy to stings.</p> <p>Rattlesnakes/ Scorpions: Maintain situational awareness. Shake out clothing & sleep gear.</p>	X				Pre-season training Employee judgment	Supervisor led pre-season training. Periodic reviews completed by the employees during the season.
Heat			X		Avoid heat stress/exhaustion/stroke by STAYING HYDRATED. Treatment crews will need to drink comparable amounts of water as firefighters (minimum of 1 gallon/day). Judge hydration by frequency and color of urine.		X			Pre-season training Employee judgment	Supervisor led pre-season training. Periodic reviews completed by the employees during the season.
Cold			x		<p>Stay dry and carry adequate layers. Avoid cotton and cotton blend fabrics.</p> <p>PPE: NONE DESIGNATED.</p> <p>PERSONAL GEAR MUST BE ADEQUATE FOR CONDITIONS.</p>		x			Pre-season training and employee judgment.	Supervisor led pre-season training. Periodic reviews completed by the employees during the season.

Fires	X				Report fires to Moab Interagency Fire Center: 435-259-1850. Use fire size-up cards. Leave vicinity of large fires and maintain ingress/ egress & escape routes	X				Same as above	Supervisor led pre-season training. Periodic reviews completed by the employees during the season.
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(Be Specific)	L	M	H	E	(Be Specific)	L	M	H	E	(Be Specific)	(Be Specific)
Cuts, impact injuries			x		-Maintain 15' intervals between workers using swinging or chopping tools. -Ensure adequate overhead clearance when preparing to use swinging/chopping tools. -Keep axes and other cutting tools sharp. Sharp blades require less force (strain) and are less likely to glance off the work surface. -With axes/adzes, always chop away from your feet, legs, and body. -Grip tool handle firmly, to maintain control in case the blade/head glances off the work surface. -Check swinging tools to ensure handles are tightly attached and free from splinters and splitting. -Avoid holding a tool or fastener for another person to drive with a sledge, if possible.		X			-Team up the least experienced workers with most experienced workers to train and model proper techniques. - Pre-project and daily crew briefings. -First Aid Training for all field going personnel.	-Routine spot checks. -End of shift review of procedures and practices. -Buddy system

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Sprains/strains from lifting/carrying tools or equipment.			X		-Always "test lift" (slightly move) a load to judge weight before actually lifting. -Stand close to objects, with feet in stable position (slightly apart). Lift up by straightening legs. -NEVER TWIST THE UPPER BODY WHILE LIFTING HEAVY OBJECTS! This is very easy to forget, especially when clearing brush and trees. -Get help for heavy loads. -On uneven ground or poor footing, make repeated trips with lighter loads. -Crouch next to load, knees bent. Keep back as straight as possible: <u>your legs should do most of the work.</u> -Use levers, rollers, jacks or other mechanical aids for lifting or moving heavy items. -The further your reach out to lift, the greater the weight of the object is increased. -Maintain personal fitness to reduce injuries. LIFTING PPE: WORK GLOVES	X				Supervisor will demonstrate proper lifting technique. (see safety office for handout, or refer to BLM H-1112-2 ("Safety and Health Field Operations")) Topic 11.2. Provide designated PPE to all crew members or require that all participants have proper PPE	Periodic reviews completed by the employees during the season.

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PAGE 7

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Falls, leg/ankle injuries from trips and twists on uneven ground.		X			-Preview intended travel/carrying route and work area for tripping hazards.		x			Briefings before project, safety briefing before every shift.	-Continuous checks.

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Food Borne Illnesses		x			<ul style="list-style-type: none"> -Thoroughly wash all raw foods -Avoid providing food that requires refrigeration, if possible. -Avoid making excess food that creates leftovers. -Eat perishable food first. -Thoroughly wash all utensils and cookware in hot water and soap after use. Sanitize all dishes and utensils after washing by soaking in just boiled (hot) water for five minutes. In a remote setting the use of a bleach rinse is advised. -Store cleaned plates, cups, glasses and pans upside down on a clean cloth or paper to protect them from contamination. 	x				<ul style="list-style-type: none"> -Pre-project briefing with trip members including employees and volunteers. 	<ul style="list-style-type: none"> -Review camping practices in daily meetings with camp participants.
Water Borne Illnesses		x			<ul style="list-style-type: none"> -Provide treated water in sanitary containers for all uses, if logistically possible: at a minimum provide treated or bottled drinking and cooking water. -Any non-treated water used for cleaning should be boiled for minimum of 5 minutes. 	X				Same as Above	Same as Above
Sewage Borne Illnesses		x			<ul style="list-style-type: none"> -Provide adequate sanitary facilities for the number of people in camp, either portable river type toilets (washable, reusable, leak-proof) or containment bags to be carried out when project is complete. 	X				Same as Above	Same as Above

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Fire		x			-No smoking in tents. -Clear brush well away from fire pan or cook stove. -If possible, keep fire extinguisher handy near campfire and cook stove/tent. -Secure propane tanks to prevent tipping or damage. -Close propane tanks for the night.	X				Same as Above	Same as Above
Medical Emergency			X		-Provide first aid kits sufficient to serve size of camp. -Determine best contact method for communicating with additional medical providers prior to the beginning of the project. -Maintain communications capabilities between camp and nearest emergency services via cell phone, radio, or satellite telephone.		x			First Aid and CPR training for all Westwater Rangers.	Same as Above

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Driving vehicles to and from boat ramp.		X			Drive posted speed limits, maintain safe following distance, wear seat belts, and minimize driver distractions. Reduce speed on non-paved roads. Inspect trailer lights and hitch security (if applicable).	X				Discuss travel safety at volunteer meetings and make available BLM Manual Handbook 1112-2 Topic 4 Motor and Equipment Safety.	Supervisor assures the volunteer is appropriately licensed.
Hostile people and Illegal activities		X			Be observant. Listen but maintain distance and do not escalate the situation. If necessary, Back off, document and contact law enforcement if necessary. BLM has Law Enforcement and the local sheriff may also be useful in some cases.		X			Follow procedures and utilize contacts provided in WAVE Handbook.	Supervisor will make available Wave Handbook, and ensure volunteer is trained to report and notify appropriate law enforcement agency of illegal and aggressive activities.